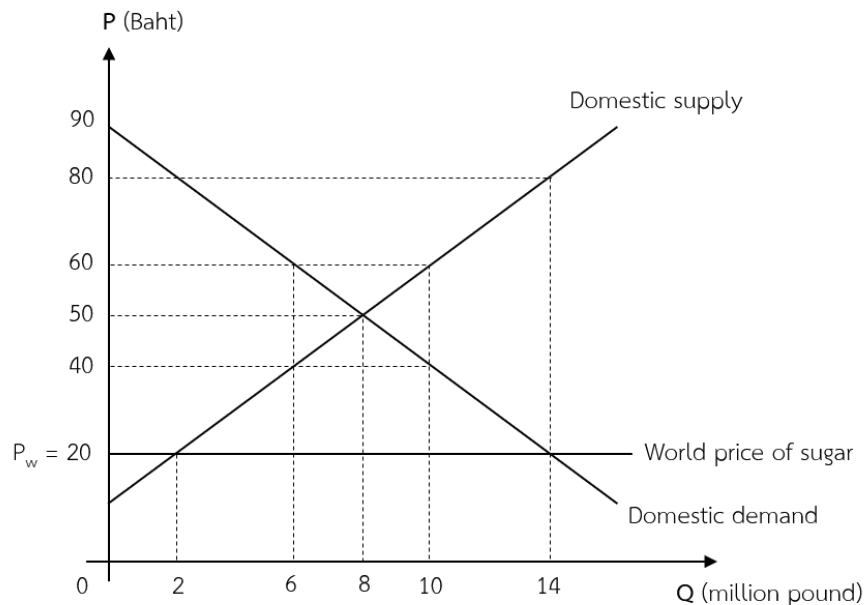


3. Supposed that sugar is traded freely in the world market, **Thai people consume domestically produced sugar while the rest is imported.** Given that world market price is 20 baht per pound and **the government decides to set domestic ceiling price equally to the world price,** below graph shows domestic demand, supply and world price level.



Answer the following questions.

Please follow the logic from what I taught in the class. This is only meant to give an example of how should you write an exam.

3.1) Supposed that **Thailand takes world price,** how many pounds of sugar is imported at the world price level?

At the world price,  $P_w = 20$ , domestic demand and supply is 14 and 2 million pounds respectively, which leads to excess demand. Therefore, domestic sellers would supply only 2 million pounds. It means that in order to fulfill buyers' demand, the rest or **12 million pounds** of sugar is to be imported.

3.2) If the government decides to collect import unit tax and the price after tax becomes 40 baht per pound,

A) How much of the sugar is domestically produced in Thailand after tax?

When the tax increases final price of sugar up to 40 Baht a pound, domestic supply becomes **6 million pounds**.

B) After tax, how much value of consumer surplus is. Also highlight the area of the surplus in the provided graph and clearly explain your argument.

Consumer surplus is a net gain of all consumers' difference between their willingness to pay and the market price.

From the graph, it is clear that the highest willingness to pay is at 90 baht a pound, while the actual price after tax is 40 baht. The difference in price is therefore 50 baht.

At 40 baht, total demand is 10 million pounds of sugar. 6 million pounds is produced locally while the rest is imported. Hence, total amount for consumers is 10 million pounds.

Total consumer surplus is therefore

$$CS = \frac{1}{2} \times 50 \times 10 \text{ M} = 250 \text{ million baht.}$$

C) How much is the government revenue? Also highlight the area of the revenue in the provided graph and clearly explain your argument.

When the government imposes import tax, the sellers realize that final price would increase. So, they end up produce more from 2 million pounds to 6 million pounds. At this price, total import is 4 million pounds as mentioned earlier.

If the unit tax is collected for imported good only, we can imply that the tax is  $40 - 20 = 20$  baht per pound.

Thus, total revenue that the government gains from import tax is  $20 \text{ baht} \times 4 \text{ million pounds} = 80 \text{ million baht}$ .